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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,622	06/29/2001	Joung Jae Lee	8733.392.00	4903

30827 7590 07/03/2002

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EXAMINER

NEGRON, ISMAEL

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 07/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,622

Applicant(s)

LEE, JOUNG JAE

Examiner

Ismael Negron

Art Unit

2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: **Elastically Tipped Support Member and LCD Back Lighting Assembly Using the Same.**

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "*the second conical shape being smaller than the first conical shape*" (claim 19) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

3. The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "*the support portion including means to enhance cohesion between the mold frame and the reflection sheet*" (claim 23) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. The drawings are even further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "*lamp supporters including lamp receiving grooves*" (claim 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Applicant is advised that this action only exemplifies the objections to the drawings, applicant's cooperation is requested in correcting all the occurrences of the cited, or any other errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 17 and 20-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 is indefinite as it is unclear if the claimed support structure is circular in cross section. A top portion is claimed as having a smaller circumference than a bottom portion, but the claims are silent as to the specific form supporting structure cross section.

Claim 20 is indefinite since it fails to properly define the claimed middle portion. It appears that language is missing from the claim.

Claims 21 and 22 are rejected for their dependency on rejected claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1, 17, 24, 26 and 27 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's own admission of Prior Art (herein after referred to as "Prior Art").

The Prior Art discloses a back lighted LCD display panel having:

- **a mold frame having first and second end portions**, Figure 1;
- **lamp supporters located at the first and second end portions of the mold frame**, inherent;
- **a lamp having first and second end portions**, page 3, lines 21 and 22 of the specification as filed;
- **the lamp supporters receiving the lamps**, inherent;
- **the lamps being received in a lower portions of a display area**, page 3, lines 5 and 6 of the specification as filed;
- **a reflection sheet located over the mold frame and below the lamps**, Figure 1, reference number 4;
- **a diffusion plate over the lamps**, Figure 1, reference number 5;

- **a diffusion plate supporting members located between the reflection sheet and the diffusion plate, Figure 1, reference number 6;**
- **the diffusion plate supporting members having an elastic material contacting the diffusion plate, page 4, lines 11 and 12 of the specification as filed;**
- **the diffusion plate supporting members including a top portion and a bottom portion, the top portion having a smaller circumference than the bottom portion, Figure 1;**
- **a plurality of diffusion plate supporting members supporting the diffusion plate; and**
- **a panel guide located opposite the mold frame with respect to the diffusion plate, Figure 1, reference number 6.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-5, 7, 11, 15, 16, 18, 23 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art .

The Prior Art discloses a back lighted LCD display panel having:

- **a mold frame having first and second end portions**, Figure 1;
- **lamp supporters located at the first and second end portions of the mold frame**, inherent;
- **a lamp having first and second end portions**, page 3, lines 21 and 22 of the specification as filed;
- **the lamp supporters receiving the lamps**, inherent;
- **the lamps being received in a lower portions of a display area**, page 3, lines 5 and 6 of the specification as filed;
- **a reflection sheet located over the mold frame and below the lamps**, Figure 1, reference number 4;
- **a diffusion plate over the lamps**, Figure 1, reference number 5;
- **a diffusion plate supporting members located between the reflection sheet and the diffusion plate**, Figure 1, reference number 6;
- **the diffusion plate supporting members having an elastic material contact portion contacting the diffusion plate**, page 4, lines 11 and 12 of the specification as filed;
- **the contact portion being made of a soft material**, page 4, lines 11 and 12 of the specification as filed; ✓
- **the contact portion being made of rubber**, page 4, lines 11 and 12 of the specification as filed;

- **the contact portion being made of plastic**, page 4, lines 1 and 2 of the specification as filed;
- **the support portion including a base portion extending outward from a bottom end of the support portion**, Figure 1;
- **the diffusion plate supporting members having a conical shape**, Figure 1;
- **means for coupling the diffusion plate supporting member and the mold frame**, inherent;
- **means for immovably coupling the diffusion plate supporting member and the mold frame**, inherent;
- **the diffusion plate supporting members including a top portion and a bottom portion, the top portion having a smaller circumference than the bottom portion**, Figure 1;
- **a plurality of diffusion plate supporting members supporting the diffusion plate**;
- **mean for enhancing cohesion between the reflection plate and the mold frame**, inherent; and
- **a panel guide located opposite the mold frame with respect to the diffusion plate**, Figure 1, reference number 6.

The Prior Art discloses all the limitations of the claims, except the diffusion support member having sufficient rigidity to prevent the diffusion plate from dropping down.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a diffusion plate support member with sufficient rigidity as to support the weight of the diffusion plate, since supporting the diffusion plate was the only reason for the diffusion plate support member to be part of the display structure, and failing to perform its intended function would render the diffusion plate support member useless.

8. Claims 8-10, 19-22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art in view of Hoven et al. (U.S. Pat. 2,865,133).

The Prior Art discloses a back lighted LCD display panel having:

- **a mold frame having first and second end portions**, Figure 1;
- **lamp supporters located at the first and second end portions of the mold frame**, inherent;
- **a lamp having first and second end portions**, page 3, lines 21 and 22 of the specification as filed;
- **the lamp supporters receiving the lamps**, inherent;
- **the lamps being received in a lower portions of a display area**, page 3, lines 5 and 6 of the specification as filed;
- **a reflection sheet located over the mold frame and below the lamps**, Figure 1, reference number 4;
- **a diffusion plate over the lamps**, Figure 1, reference number 5;

- **a diffusion plate supporting members located between the reflection sheet and the diffusion plate, Figure 1, reference number 6;**
- **the diffusion plate supporting members having an elastic material contact portion contacting the diffusion plate, page 4, lines 11 and 12 of the specification as filed;**
- **the contact portion being made of a soft material, page 4, lines 11 and 12 of the specification as filed;**
- **the contact portion being made of rubber, page 4, lines 11 and 12 of the specification as filed;**
- **the contact portion being made of plastic, page 4, lines 1 and 2 of the specification as filed;**
- **the diffusion plate supporting members having a conical shape, Figure 1;**
- **means for coupling the diffusion plate supporting member and the mold frame, inherent;**
- **means for immovably coupling the diffusion plate supporting member and the mold frame, inherent;**
- **the diffusion plate supporting members including a top portion and a bottom portion, the top portion having a smaller circumference than the bottom portion, Figure 1;**

- **a plurality of diffusion plate supporting members supporting the diffusion plate; and**
- **a panel guide located opposite the mold frame with respect to the diffusion plate, Figure 1, reference number 6.**

The Prior Art discloses all the limitations of the claims, except:

- the support portion being made out of metal;
- the contact portion including a cap having an insertion hole for receiving one end of the support portion;
- contact portion having a projection for preventing the contact portion from being detached from the support portion;
- the top portion of the support portion having a first conical shape and the bottom portion having a second conical shape;
- the second conical shape being smaller than the first conical shape; and
- a cylindrical middle portion between the first and second portions.

Hoven et al. discloses a support structure having :

- **a supporting member, Figure 1, reference number 12;**
- **the supporting member being made out of metal, column 1, lines 50-52;**
- **the supporting member having an elastic material contact portion, Figure 1, reference number 13;**

- **the contact portion being made of rubber**, column 1, lines 57 and 58;
- **the contact portion being made of plastic**, column 1, line 59;
- **the supporting member having a conical shape**, Figure 1;
- **the contact portion including a cap having an insertion hole for receiving one end of the support portion**, Figure 5, reference number 17;
- **the contact portion having a projection for preventing the contact portion from being detached from the support portion**, column 1, lines 57-62;
- **the top portion of the support portion having a first conical shape and the bottom portion having a second conical shape**, Figure 3;
- **the second conical shape being smaller than the first conical shape**, Figure 3; and
- **a cylindrical middle portion between the first and second portions.**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the Prior Art and Hoven et al. to obtain a support member with the rigidity to support the weight of the structure it is supporting, but also a contacting surface soft enough as to not create scratches or any other kind of surface damage to the surface it is in contact with, as per the teachings of Haven et al.

9. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Prior Art .

The Prior Art discloses a back lighted LCD display panel having:

- **a mold frame having first and second end portions, Figure 1;**
- **lamp supporters located at the first and second end portions of the mold frame, inherent;**
- **a lamp having first and second end portions, page 3, lines 21 and 22 of the specification as filed;**
- **the lamp supporters receiving the lamps, inherent;**
- **the lamps being received in a lower portions of a display area, page 3, lines 5 and 6 of the specification as filed;**
- **a reflection sheet located over the mold frame and below the lamps, Figure 1, reference number 4;**
- **a diffusion plate over the lamps, Figure 1, reference number 5;**
- **a diffusion plate supporting members located between the reflection sheet and the diffusion plate, Figure 1, reference number 6;**
- **the diffusion plate supporting members having an elastic material contact portion contacting the diffusion plate, page 4, lines 11 and 12 of the specification as filed;**
- **the contact portion being made of a soft material, page 4, lines 11 and 12 of the specification as filed;**

- **the contact portion being made of rubber**, page 4, lines 11 and 12 of the specification as filed;
- **the contact portion being made of plastic**, page 4, lines 1 and 2 of the specification as filed;
- **the support portion including a base portion extending outward from a bottom end of the support portion**, Figure 1;
- **the diffusion plate supporting members having a conical shape**, Figure 1;
- **means for coupling the diffusion plate supporting member and the mold frame**, inherent;
- **means for immovably coupling the diffusion plate supporting member and the mold frame**, inherent;
- **the diffusion plate supporting members including a top portion and a bottom portion, the top portion having a smaller circumference than the bottom portion**, Figure 1;
- **a plurality of diffusion plate supporting members supporting the diffusion plate**; and
- **a panel guide located opposite the mold frame with respect to the diffusion plate**, Figure 1, reference number 6.

The Prior Art discloses all the limitations of the claims, except:

- the support portion including a first hole;
- the mold frame including a second hole;

- a fastening element passing through the first and second hole for coupling the mold frame and the supporting member; and
- the fastening member being a screw.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use screws to couple the supporting portion to the mold frame since the Examiner take Official Notice that the use, and its advantages over other fastening means, of screws as fastening elements is old and well known in the art.

Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitchell (U.S. Pat. 3,604,675), **Bilsback** (U.S. Pat. 3,828,215) and **Mars** (U.S. Pat. 4,089,045) disclose display panels having resilient support means located between a backing member and the display matrix.

Torrey (U.S. Pat. 60,967), **Lewis** (U.S. Pat. 268,697), **Shanahan** (U.S. Pat. 755,713) and **Christmas** (U.S. Pat. 1,921,561) disclose support members having resilient portions to protect and reduce wear on the surfaces they contact, some with means to prevent detachment of the resilient portion from the rest of the support member.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Negrón whose telephone number is (703) 308-6086. The examiner can normally be reached on Monday-Friday from 9:00 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra L. O'Shea, can be reached on (703) 305-4939. The facsimile machine number for the Art Group is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



THOMAS M. SEMBER
PRIMARY EXAMINER

Inr

June 28, 2002